

CLAIMS

1. A method for producing a nonwoven fabric, in which a mat of filaments or of fibers which is in displacement, said filaments or fibers being composed of an organic material, is compacted in the direction of thickness at a point on its path of displacement, and the compacted mat is then consolidated into a consolidated mat, downstream at a consolidation station, characterized in that the displacement speed of the mat is reduced at the very point on its path of displacement where it is compacted.
2. The method as claimed in claim 1, characterized in that the displacement speed of the mat is reduced by 5 to 50%.
3. The method as claimed in claim 1 or 2, characterized in that the thickness of the mat at compacting is reduced from 99% to 30%.
4. The method as claimed in one of claims 1 to 3, characterized in that the mat is wetted at compacting or just downstream of compacting.
5. The method as claimed in one of claims 1 to 4, characterized in that the mat is consolidated by causing it to pass through the consolidation station at the reduced speed.
6. The method as claimed in one of claims 1 to 5, characterized in that the mat is consolidated by hydraulic entanglement, by thermal binding, by chemical binding and/or by mechanical needling.
7. The method as claimed in one of claims 1 to 6, characterized in that the mat is a mat of filaments coming from a machine in hot-melt operation or a mat of fibers coming from a card for nonwoven fabrics or from a machine operating by air, known as air-laid operation.
8. The method as claimed in one of claims 1 to 7, characterized in that the mat is maintained by applying a vacuum to it between the point where it is compacted and the consolidation station.
9. A machine for producing a nonwoven fabric, comprising a first element (1) for delivering a mat to means (7) intended for compacting it in the direction of thickness, characterized in that said means (7, 8) are also means intended for reducing the displacement speed of the mat at the point where it is compacted.
10. The machine as claimed in claim 9, characterized in that the compacting and speed reduction means are implemented by the formation of a nipping point between the first element (7) and another moveable element

(8) having a linear speed lower than that of the first element.

11. The machine as claimed in claim 10, characterized in that the other moveable element is a conveyor or a second cylinder.

5 12. The machine as claimed in one of claims 9 to 11, characterized by means (9) intended for wetting the mat when it is being compacted or when it has just been compacted.

13. The machine as claimed in one of claims 9 to 12, characterized by means (10) for consolidating the mat, which are arranged downstream of the compacting means in the direction of displacement of the mat.

10 14. The machine as claimed in claim 13, characterized in that the consolidation means are arranged so as to consolidate the mat when it passes over the other moveable element.

15 15. The machine as claimed in either one of claims 13 and 14, characterized by means of maintaining the mat between the compacting means and the consolidation means by a vacuum.

16. The use of a method or of a machine as claimed in one of claims 1 to 15 for reducing the ratio of a property of a nonwoven fabric in the length direction to this property in the breadth direction.